

**County of San Bernardino  
Transportation/Flood Control  
Land Development**

**Street Improvement Plans submittal requirements**

Improvement Plans will not be accepted on first submittal without the following:

I. Initial submittal Requirements

A. Submit the following:

1. Five (5) sets of plans signed and sealed by Engineer.
2. Engineer's estimate of quantities (check with Land Development for current unit costs), for bonding purposes.
3. Checking fee, (payable to County of San Bernardino)

	<u>Initial Deposit Per Sheet</u>
a. Single Family	\$1,000.00
b. Conditional Use (Plot)	\$2,500.00
c. Minor Subdivision/Tentative Parcel Map	\$2,500.00
d. Tract	\$2,500.00

4. Survey notes and/or plotted cross sections.
5. Drainage study, if applicable.
6. Owner's name and address.
7. Project number and Assessor's Parcel number. Assessor Parcel number not needed on Tract Street Improvement Plans. (Project #, MS #, PP#, SA#, PM#, TR#, etc.)

B. Deliver or mail to:

1. West Valley, East Valley  
Land Development Division  
825 East Third Street, Second Floor  
San Bernardino, CA 92415  
Phone (909) 387-8145
2. North Desert  
Land Development Division  
15456 West Sage Street, Suite 207  
Victorville, CA 92392  
Phone (760) 843-4366

- C. Coordinate with Cal-Trans when project adjacent to State Highway.
  - D. Coordinated with City when project adjacent to or in sphere of Influence.
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## II. Preparation of Plans

### A. Project Design Parameters and Format

1. Project design must conform to Planning Commission Conditions of Approval, applicable County standards and acceptable engineering design principles.
2. Standard Plan and Profile mylar
  - a) Sheet size 24" x 36"
  - b) All work shall be done in ink and must be clearly reproducible
  - c) Stick-on's allowed for Title Block only

### B. Title Block

1. Use standard San Bernardino County Road Department Title Block
2. Show street name
3. Show Plot Plan Index Number, Minor Subdivision Number or Tract Number
4. Show road number and limits of work (will be provided by Land Development Division)
5. Show Engineer's address block
6. Include Registered Civil Engineer's signature, Registration number, date, seal and expiration date

### C. Index and Vicinity Map

1. Show on first sheet
2. Index map required in addition to vicinity map with multiple sheet projects
3. Show street drainage diagram with drainage arrows on index map
4. Show North arrow pointing up or to the right
5. Show street names

### D. Typical Section

1. May be shown on title sheet (multiple sheet projects) or on applicable plan sheet
2. Show existing and proposed Right-of-way dimensions
3. Show and dimension all proposed construction elements (i.e.: curb and gutter, sidewalk, walls, widths of existing and proposed pavement widening, etc.)
4. Indicate cross-slope gradients and parkway, existing and proposed A.C. widening
5. Cross-slope of proposed A.C. widening shall be 1-5% - %5 range
6. Match-up widening to existing pavement should show saw-cut line (when applicable) and a minimum 2' of feather of existing
7. When required show minimum 0.1' A.C. overlay over existing pavement
8. Show removals of existing curb/A.C. berm, A.C. pavement etc.
9. Include following caption under typical section: "Construct \_\_\_ A.C. over \_\_\_ per soils test"

E. General Notes

1. Include listing of applicable County approved general notes on first sheet

F. Plan Review

1. Show bench mark information on first sheet. U.S.C. and G.S. or other datum acceptable to the San Bernardino County Transportation Department shall be used.
2. North arrow (oriented up or to the right)
3. Scale is 40-feet to 1-inch (other scales require prior approval)
4. Direction of stationing should be from South to North or West to East
5. Show centerline stationing at 100' stations
6. Extend future curb and gutter 300' beyond limits of proposed improvements or to tie to existing curb and gutter
7. Stationing at centerline intersections with equations, if applicable
8. Stationing at limits of construction
9. Show centerline intersection station tie to nearest County Maintained Road
10. Stationing and T.C./F.L. elevations at B.R.C.'s and E.C.R.'s
11. Stationing of B.C.'s, P.R.C.'s, E.C.'s
12. Show names of all streets
13. Curb return data (Delta, Tangent, Radius, Length)
14. Curb return and Right-of-Way radius is 20' for Local and Collector Streets; 35' for Secondary and Major Highways
15. Centerline curve data (Delta, Tangent, Radius, Length)
16. Show proposed cross-gutters and spandrels with F.L. elevations at street centerline and P.I.'s
17. Show lot lines and numbers
18. Show and dimension existing and proposed Right-of-Way lines for both sides of street
19. Plot and label existing topo within Right-of-Way, including disposition if affected by construction
20. Show connections to existing improvements with elevations and stationing
21. Show alleys and Right-of-Way dimensions
22. shade proposed pavement construction
23. Hatch proposed A.C. overlay
24. Cross-hatch existing pavement removal areas
25. Show all existing driveways within area affected by construction
26. proposed driveways shall include Standard Number, width and Center Line station
27. Show all easements and existing utilities
28. Indicate existing and proposed flowlines with drainage flow arrows (include F.L. elevations where applicable)
29. Show details of proposed improvements which are not County standard or Cal-Trans standard plans
30. Reference all proposed improvements with applicable construction notes on each sheet
31. Show all proposed drainage facilities including construction data, dimensions, C.L. and corner elevations, and centerline stationing

32. Denote type, size, length, gauge/strength of drainage pipe lines
33. Show sidewalk raps at all intersections where sidewalk required
34. Show curb cut off wall and/or thickened-end section where dewatering off terminus of road exceeding 3% grade

G. Profile View

1. Horizontal scale to correspond to plan scale
2. Vertical scale is 4-feet to 1-inch (other scales require prior approval)
3. Show datum reference at both ends of profiles
4. Existing ground at centerline and proposed centerline grade
5. Existing edge of pavement left and/or right or centerline on match-up widening
6. Existing ground at Right-of-Way line left and right of centerline
7. Existing and proposed top of curb left and/or right of centerline
8. Curb return profile with B.C.R./E.C.R. designations; dimension length of return and flag elevations at  $\frac{1}{4}$  points
9. Curb returns transitioning height of curb face should show increments of transition at  $\frac{1}{4}$  points
10. Label all grad lines and profiles
11. Stationing and elevations at limits of construction and at B.V.C.'s, E.V.C.'s, and grade breaks (1% maximum G.B. is allowed)
12. Show all grades (consult County design specifications for minimums/maximums)
13. Stationing and elevations at 25' increments on vertical curves
14. Extend profiles beyond limits of improvement for 300' or to ties to existing curb and gutter
15. Stationing at bottom of profile grid
16. Names, stations, elevations or intersecting streets
17. Length of vertical curves to be a function of design speed (consult with County specifications) and safe stopping sight distance. 100' is minimum length
18. Grade of "X" gutters shall be relative to street centerline grade. Using edge of gutter as control, maintain a 2% "X"-slope on new street construction and wrap gutter flow line between end of "X" gutter and point of return
19. Profile required for all proposed drainage facilities
20. Show existing and proposed utility and drainage facility crossings
21. Profiles required for all proposed drainage facilities, including hydraulic grade line
22. Maximum approach grade to intersections shall not exceed 6%

H. Details

1. Construction for proposed non-standard facilities (see section "F" item #29) may be shown on applicable plan sheet or separate detail sheet
2. Show all necessary views and sections with dimensions, notes, data, specifications, elevations and re-bar placement
3. Include and special construction notes applicable to proposed facility

I. Revisions (to approved plans)

1. Description of revisions to be included in revision block
2. Revision symbol (denoted  $\Delta$  with sequential number), shown on revision block and on plan
3. Submit check prints to regional office which show proposed revisions in red

**County of San Bernardino  
Transportation/Flood Control  
Traffic Division**

**Submittal Requirements for Traffic Control Plans**

Improvement Plans will not be accepted without the following:

- ☐ 1. Traffic Control General Notes. (See page 4 for current revision).
- ☐ 2. **Existing & Proposed Traffic Control Devices.** (Striping **as shown** per San Bernardino County Standards and Specification 307 thru 307d. Pavement legends **as shown** per California MUTCD Sept. 26, 2006. Fig 3B-20 and Fig 3B-21).
- ☐ 3. Vicinity map including nearest freeway off ramp or major cross street.
- ☐ 4. Distance of proposed road or tract entrance to the nearest county maintained road.
- ☐ 5. Identify **each type** of traffic control device **separately** by referring to California MUTCD Sept. 26, 2006 and San Bernardino County Std. 307 thru 307d for signing and striping references, where applicable.
- ☐ 6. Provide a numbered list of "Construction / Signing and Striping Notes" to identify **all** signs and pavement markings. See above Submittal Requirements 2 and 5.
- ☐ 7. Remove or darken all "Construction / Signing and Striping Notes" not used on each plan sheet.
- ☐ 8. Submit all existing and proposed paved roads with edge of pavement identification and all existing and proposed dirt roads with edge of travel way identification, including all proposed a.c. asphalt dike and a.c. curb and gutter locations.
- ☐ 9. Provide travel lane width /road width dimensions on all pertaining plan sheets.
- ☐ 10. Provide adequate road transitions for all locations including new and existing roads where there is an abrupt change in road alignment. Identify transition/taper length "L" using applicable formula shown in California MUTCD Fig. 3B-12(CA) and Fig 3B-101(CA).
- ☐ 11. Install CA Type L-1 (OM2-2V) object markers along all asphalt dike, curb and gutter, transition/tapers (where road narrows for approaching traffic) per California MUTCD Sept. 26, 2006 Fig. 3C-1(CA).
- ☐ 12. Provide a 50ft asphalt extension (apron) for each dirt road intersecting a proposed paved road, including dirt roads entering paved intersections perimetering project.
- ☐ 13. Draw corner sight distance dashed lines at all project related intersections and driveways, including intersections bordering project. (Ref.: Caltrans Highway Design Manual Index No. 405.1, Table 405.1A) Provide plan and profile with object heights for verification. Show existing and proposed landscaping on plans as part of the corner sight distance evaluation (where applicable). **Identify all sight restrictions to be cleared** within sight triangle per attached Typical Corner Sight Distance Diagram Fig 1 requirements. **Dimension sight distance (ft) with required speed (mph).**
- ☐ 14. Evaluate stopping sight distance especially roads with vertical and horizontal curves. Provide plan and profile for verification with separate evaluation findings for each vertical / horizontal curve, including minimum required sight distance, where applicable.

- ☐ 15. Evaluate passing sight distance for all the roads related to the project. Provide plan and profile for verification with separate evaluation findings for each vertical / horizontal curve, including minimum required sight distance, where applicable.
- ☐ 16. Assign Assessors Parcel Number (APN) to each plan submittal.
- ☐ 17. Identify City/County/State boundaries where applicable. (Ex: - SAN BERNARDINO COUNTY - - - )  
(NAME) CITY
- ☐ 18. Identify all Rights-of-Way for any and all agencies bordering project, including City, County, State, Railroad, etc.
- ☐ 19. Determine and note on plan largest vehicle use (i.e. fire truck, RV vehicle, trash truck, passenger car) for each driveway. Show and identify vehicle wheel tracking lines for all applicable driveways (entering and exiting driveway) and for each separate vehicle turning movement at all pertaining intersections/driveways per Caltrans Highway Design Manual Fig 407A thru 407E and ASSHTO "A Policy on Geometric Design on Highways and Streets" Exhibit 2-3 thru 2-23. Provide vehicle turning template figure and agency designation for each turning radius requirement. Design driveway entrances showing entering and exiting vehicle paths (side by side) without tracking line overlap. (Wheel tracking lines are not required for passenger cars)
- ☐ 20. Review and comply with spacing requirements for commercial or residential driveways per the "San Bernardino County Transportation Department Road Planning and Design Manual" figure 6-1. Show and identify nearest existing driveway(s) adjacent to proposed project driveway(s) where applicable.
- ☐ 21. Determine which streets should be designated as "Through Highways" at all uncontrolled intersections. Install stop signs and Street Name Markers (per San Bernardino County Standard & Specifications 303, 303a, & 303b) where appropriate. Provide justification for all designated through highways.
- ☐ 22. Install pavement ends advanced warning signing. See attached "PAVEMENT TO DIRT TRANSITION SIGNING PACKAGE" document
- ☐ 23. Install a CW9R "ROAD NOT MAINTAINED BY SAN BERNARDINO CO" warning sign at all non-maintained road locations exiting newly constructed/ existing San Bernardino County maintained roads.
- ☐ 24. Install curve warning signs where applicable, and provide justification.
- ☐ 25. Install Type F (white) delineators at all horizontal curve locations meeting the radius criteria listed in the Calif. MUTCD (Sept. 2006) Table 3D-1. Also See Fig. 3D-1 and Fig 3D-101(CA).
- ☐ 26. Install speed limit signs where applicable, and provide justification.
- ☐ 27. Install W14-1 "DEAD END" or W14-2 "NO OUTLET" signs where applicable.
- ☐ 28. Install a yellow OM1-3 "object marker" facing the terminating street at all "T"/ "L" type intersections, where applicable.
- ☐ 29. Install "ENTRANCE ONLY"/"EXIT ONLY" signs at all applicable driveways, also install pavement marking directional arrows to supplement the signing.
- ☐ 30. Install R26 (CA) "NO PARKING" sign(s) where applicable per California MUTCD Sept. 26, 2006. Fig. 2B-16(CA).
- ☐ 31. Provide stationing throughout project for all streets.

- ☐ 32. The developer should reflect all the conditions of approval on the submitted project plans. Acknowledge if Traffic Impact Fees (Fair Share) have been paid.
- ☐ 33. Provide a separate Signature Block #1 for all **Street Improvement Plans** pertaining to only those sheets with traffic controls comments:

BLOCK#1

CHIEF, TRAFFIC DIVISION	DATE
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Note: Block placement should be located above main blocks in lower right hand corner of sheet.

- ☐ 34. Provide Signature Block #2 for **Signing and Striping Plans** pertaining to only those sheets with traffic control comments:

BLOCK#2

COUNTY OF SAN BERNARDINO DEPARTMENT OF PUBLIC WORKS			
SURVEYED BY:	DRAWN BY:	CHECKED BY:	APPROVED BY
SUBMITTED BY		C.D.E	
RECOMMENDED/APPROVED BY		RECOMMENDED/APPROVED BY	
CHIEF, TRAFFIC DIVISION	DATE	DIRECTOR OF PUBLIC WORKS	DATE

- ☐ 35. Transfer all traffic control references (including Signature Blocks-comply with above Submittal Requirement 31 and 32) to **Signing and Striping Plan** sheet(s) from **Street Improvement Plan** sheet(s).
- ☐ 36. Contact the Street Name Clerk (Mary Anne Causey ) for the San Bernardino County Traffic Division at (909) 387-8186 to confirm the street name(s).

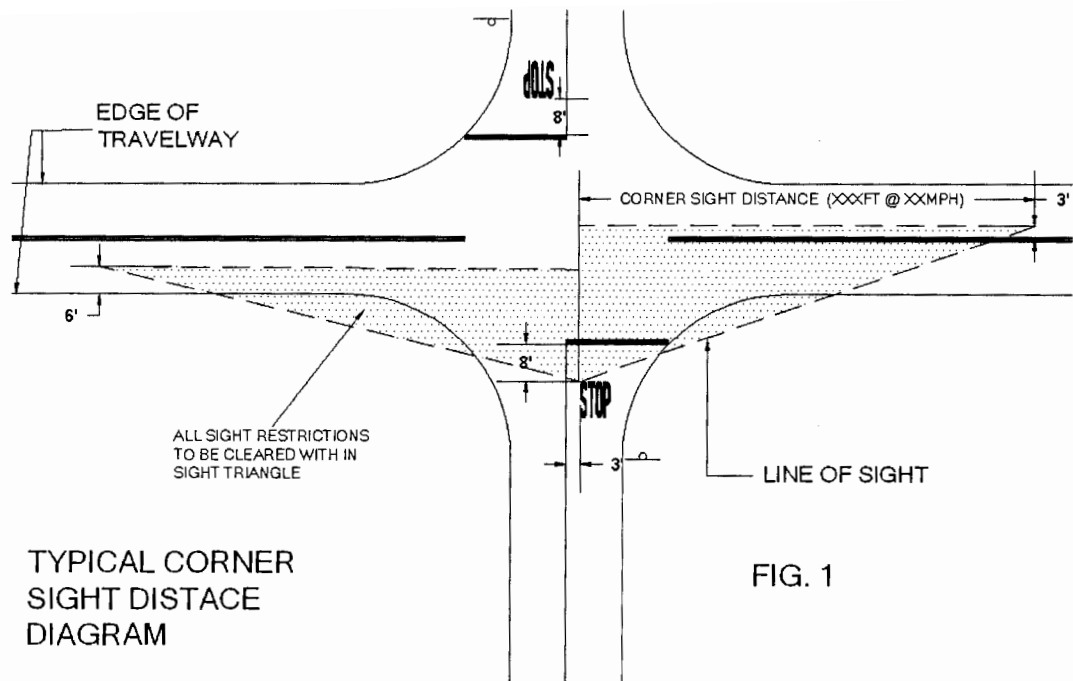


SAN BERNARDINO COUNTY  
TRAFFIC CONTROL -GENERAL NOTES

- NOTE 1: ALL signing and pavement markings SHALL BE in conformance with the California MUTCD Sept. 26, 2006 and striping per San Bernardino County Standard & Specifications 307 thru 307d.
- NOTE 2: ALL striping (long line) and pavement markings SHALL BE retroreflective paint.
- NOTE 3: ALL signs SHALL BE of high intensity (FHWA Type III/IV) retroreflective sheeting except:
- A. STOP signs SHALL BE Diamond Grade (FHWA TYPE VII in rural settings and TYPE IX in urban settings) retroreflective sheeting.
  - B. "No Parking" signs SHALL BE of Super Engineering Grade (FHWA Type II) retroreflective sheeting.
  - C. School signs SHALL BE of Diamond Grade (FHWA Type IX) fluorescent yellow-green (FYG) retroreflective sheeting.
  - D. Street Name Markers SHALL BE of Diamond Grade (FHWA Type IX) retroreflective sheeting and conform to County Standard 303.
  - E. Construction signs SHALL BE of Diamond Grade (FHWA Type IX) fluorescent orange retroreflective sheeting.
- NOTE 4: All Delineators, Channelizers, and Object Markers SHALL BE of FHWA Type VII retroreflective sheeting.
- NOTE 5: Signs SHALL BE mounted on metal posts similar to County Standards 303(a) and 303(b).
- NOTE 6: ALL conflicting striping and pavement markings NOT SHOWN on plans SHALL BE removed by the Contractor. Removal SHALL BE accomplished by sandblasting, grinding, or as directed by County Representative.
- NOTE 7: ALL conflicting signs SHALL BE removed, relocated, or covered by the Contractor. Relocatable signs SHALL BE installed as specified on the plans or as directed by County Representative.
- NOTE 8: ALL unprotected locations resulting in isolated abrupt depressions or elevated objects (i.e. catch basins, headwalls, power poles, end treatment of asphalt dikes and concrete curbs) SHALL BE protected by delineators or barriers per the California MUTCD Sept.26, 2006
- NOTE 9: ALL existing signing, striping and pavement markings (i.e. cross street STOP, stop LIMIT LINE, and CROSSWALK pavement markings) NOT SHOWN on plans, if removed/obliterated, SHALL BE replaced/restored of same kind, and in conformance with the current edition of the California MUTCD Sept.26, 2006 and the San Bernardino County Standard & Specifications 307 thru 307d (striping).
- NOTE 10: The Contractor SHALL notify County Representative to schedule a final review (walk through) with Traffic Division personnel for approval of Traffic Control Devices prior to project acceptance.

REV 3/1/07

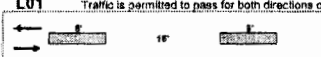
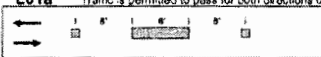
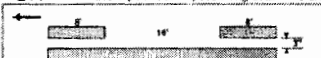
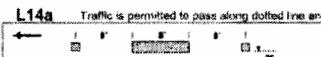

**For questions regarding the above requirements please call Traffic Division @ (909) 387-8186**

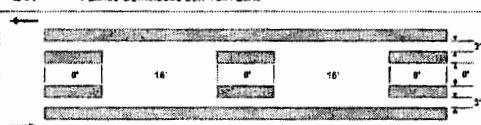
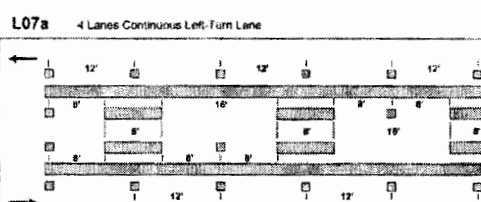



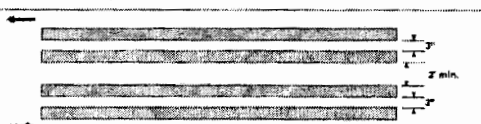
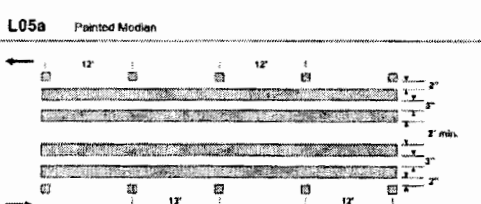

Corner sight distance for minor road should be evaluated from a 3 1/2ft object height for the drivers eye 8ft in back of limit and 3ft from centerline of road to a 4 1/4 ft object height in the center of approaching lane on major road.

### Clear view required within the sight distance triangle

Refer to highway design manual topic 405, section 405.1 sight distance and table 405.1A for required corner sight distance.

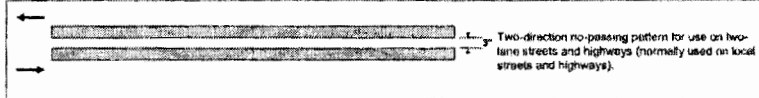
CENTERLINE STRIPING			
<b>L01</b> Traffic is permitted to pass for both directions of travel  <p>Centerline pattern for use on two-lane streets and highways (normally used on local streets and highways).</p>			
<b>L01a</b> Traffic is permitted to pass for both directions of travel  <p>Centerline pattern with pavement markers for use on two-lane streets and highways.</p>			
<b>L14</b> Traffic is permitted to pass along dotted line and passing is prohibited along solid line  <p>One direction no-passing pattern for use on two-lane streets and highways (normally used on local streets and highways).</p>			
<b>L14a</b> Traffic is permitted to pass along dotted line and passing is prohibited along solid line  <p>One direction no-passing pattern with pavement markers for use on two-lane streets and highways.</p>			
			
SAN BERNARDINO COUNTY TRANS. DEPT. NOT TO SCALE Revised 12/05		<b>STRIPING DETAILS</b>	<b>307</b>
PAT MEAD Director of Public Works			

CENTERLINE STRIPING			
<b>L07</b> 4 Lanes Continuous Left-Turn Lane  <p>Two way left turn lane pattern for use on two-lane streets and highways (normally used on local streets and highways).</p>			
<b>L07a</b> 4 Lanes Continuous Left-Turn Lane  <p>Two way left turn lane pattern with markers for use on two-lane streets and highways.</p>			
			
SAN BERNARDINO COUNTY TRANS. DEPT. NOT TO SCALE Revised 12/05		<b>STRIPING DETAILS</b>	<b>307a</b>
PAT MEAD Director of Public Works			

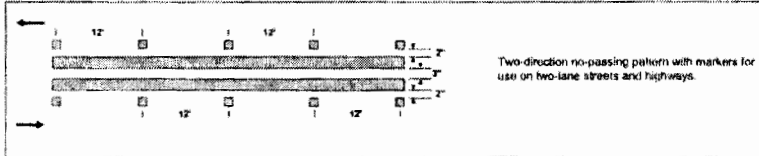
CENTERLINE STRIPING			
<b>L05</b> Painted Median  <p>Double Left Edgeline pattern for use on all-paved sections of streets and highways (normally used on local streets and highways).</p>			
<b>L05a</b> Painted Median  <p>Double Left Edgeline pattern with pavement markers for use on all-paved sections of streets and highways.</p>			
			
SAN BERNARDINO COUNTY TRANS. DEPT. NOT TO SCALE Revised 12/05		<b>STRIPING DETAILS</b>	<b>307b</b>
PAT MEAD Director of Public Works			

## CENTERLINE STRIPING

**L12** 2 Lanes 1 Each Direction, No Passing



**L12a** 2 Lanes 1 Each Direction, No Passing



Direction of Travel 4" Yellow Stripe Two-Way Yellow Reflective Markers

SAN BERNARDINO COUNTY TRANS. DEPT.

NOT TO SCALE

PAT MEAD

Director of Public Works

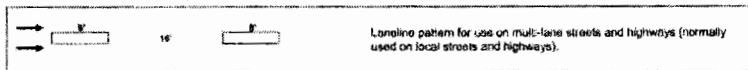
**STRIPING DETAILS**

**307c**

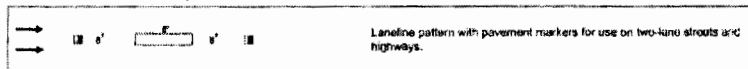
Revised 12/05

## LANE LINE STRIPING

**L26** Lane Line Quarterstripe Pattern



**L26a** Lane Line Quarterstripe Pattern



## EDGE LINE STRIPING

**L27** Right Edgeline



Direction of Travel 4" White Stripe One-Way White Reflective Markers

SAN BERNARDINO COUNTY TRANS. DEPT.

NOT TO SCALE

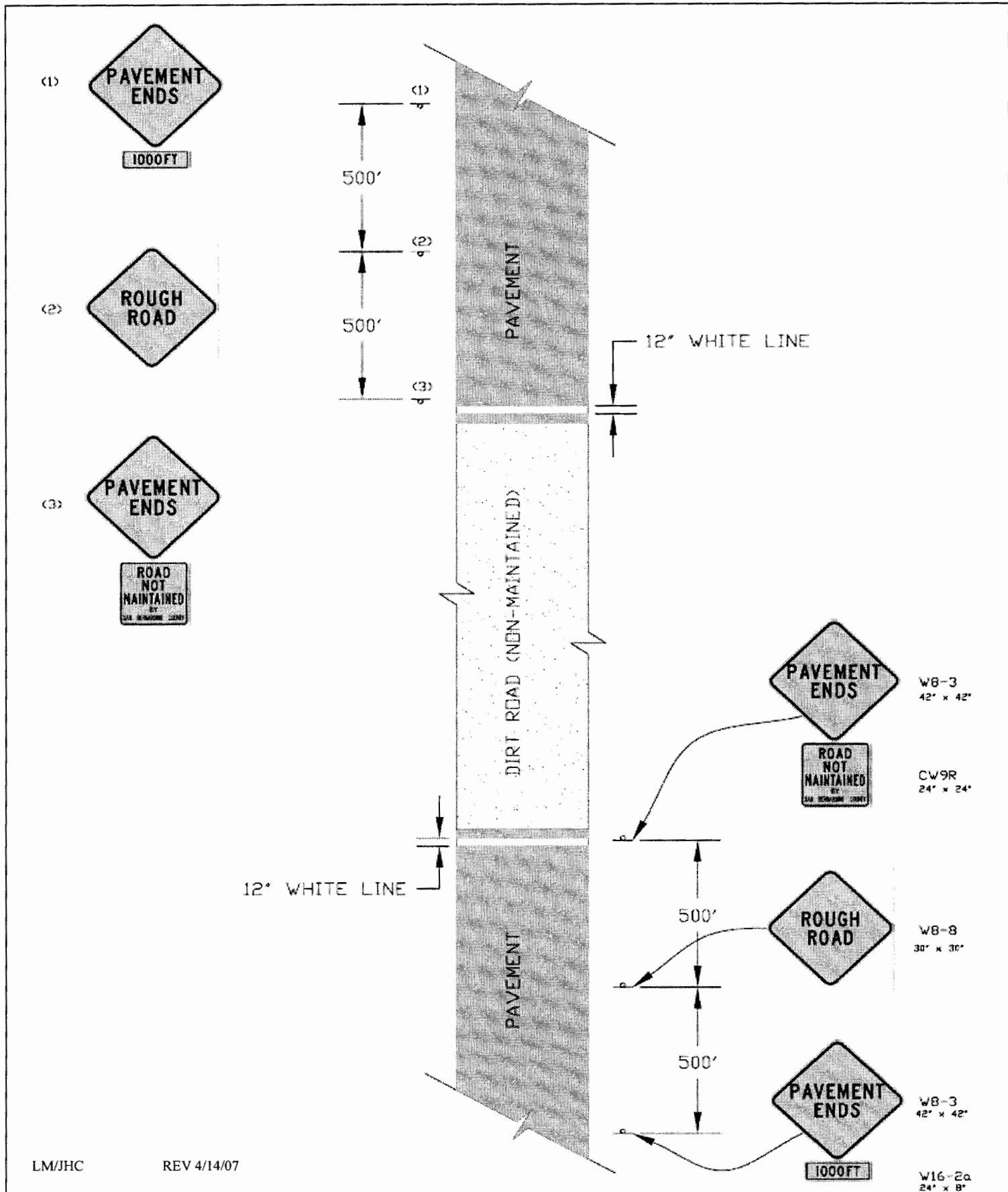
PAT MEAD

Director of Public Works

**STRIPING DETAILS**

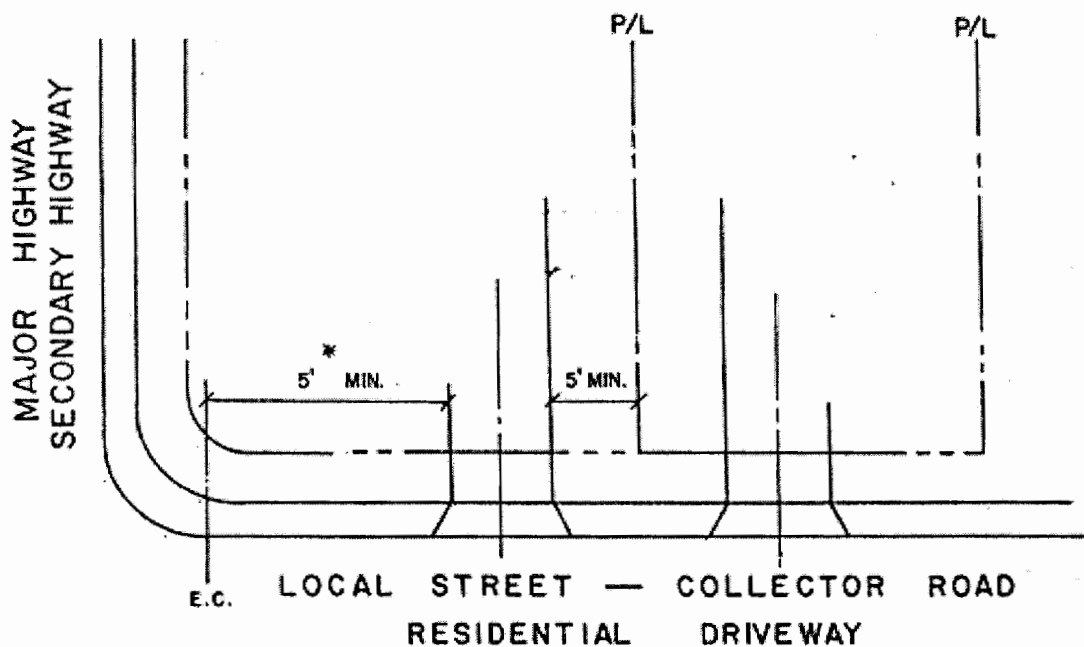
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Revised 12/05

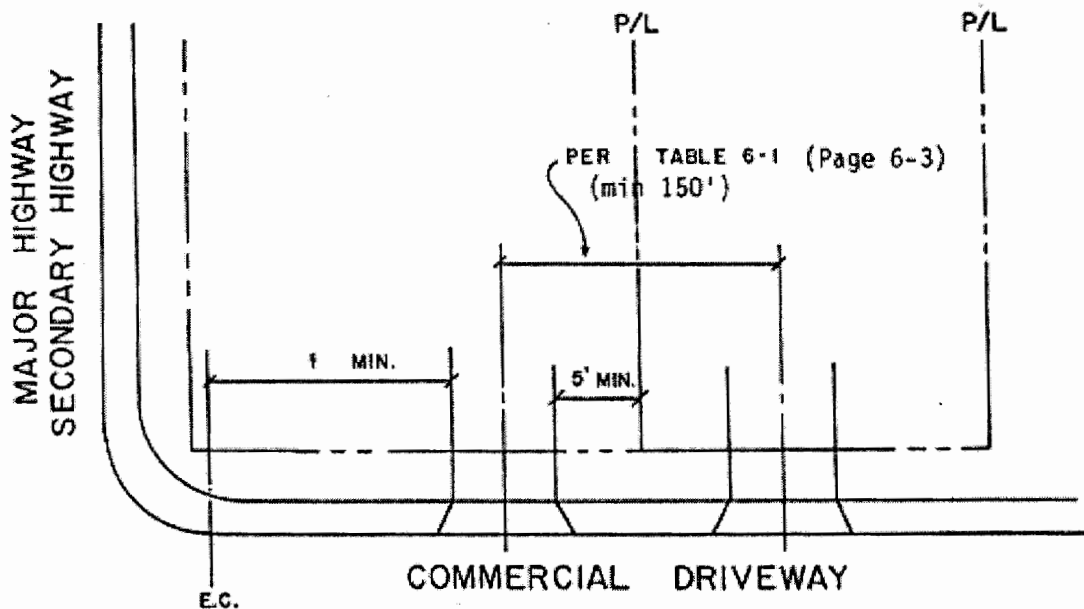


LM/JHC

REV 4/14/07



\* 75' ON COLLECTOR ROADS, EXCEPT 50' IF ULT. A.D.T. IS LESS THAN 3000



† ON MAJOR OR SECONDARY HIGHWAY 150', MAY BE INCREASED TO  
PROVIDE ADDITIONAL CLEARANCE FOR LEFT TURN STORAGE  
75' ON COLLECTOR ROADS AND 50' ON LOCAL STREETS.

Refer to Section 6.3 for number of access points permitted.

SAN BERNARDINO COUNTY TRANS.DEPT.		DRIVEWAY SPACING	FIGURE 6-1
<div style="border: 1px solid black; padding: 2px;">           R.T. (2-5)         </div>	KEN A. MILLER Director of Transportation		